



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,027	09/26/2003	Yann Le Gallo	60130-1894;02MRA0144	8046

26096 7590 08/23/2005

CARLSON, GASKEY & OLDS, P.C.  
400 WEST MAPLE ROAD  
SUITE 350  
BIRMINGHAM, MI 48009

EXAMINER

COLON SANTANA, EDUARDO

ART UNIT PAPER NUMBER

2837

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/673,027	<b>Applicant(s)</b> LE GALLO, YANN	
	<b>Examiner</b> Eduardo Colon Santana	<b>Art Unit</b> 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>Detailed Action</u> .                  |

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/13/2005 has been entered.
2. Applicant's amendments with respect to claims 1, 7 and 14 have been fully considered but they are not persuasive.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1, 7 and 14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 1, 7 and 14 includes the limitation "... wherein only the direct detector is provided with the openable member position information."

Art Unit: 2837

This new limitation is not properly described in the application as filed and does not satisfactorily resolves a particular issue regarding what applicant considers to be patentable subject matter. Where is this exclusive relationship taught? Sensors 14 and 52 do not seem to communicate directly. Also, controllers use detector outputs. Simple detectors with recited functionality of "detecting an obstruction" would not use another sensor obstruction detection unless the functional language is incomplete.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claims 1, 7 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 7 and 14 are functional, vague and indefinite. Claims 1, 7 and 14 only recites a direct and indirect detector with the recited functions without the recitation of any other elements or limitations other than to further define using a "wherein" statement. The claim lacks context for the limitation of "only". That is, what structure is excluded? The claims fail to provide any other elements or limitations for performing the recited functions, which causes the claim to be functional, confusing, vague and indefinite. The recited function that only the direct detector is provided with the openable member position information, without the recitation of any connections

Art Unit: 2837

any connections or relationships with a particular control system causes the claims to be confusing, vague, and indefinite for the lack of connectivity or relationships. Additionally, it is kind of awkward to describe that only a direct detector is provided with member position information, for the fact that "detectors" or "sensors" do not process information.

5. Claims 1, 7 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: a control function or processor, which receives the openable member position information signal from the indirect detector and provides the necessary output control signal to the direct detector.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-4, 6-15 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by O'Connor et al. in publication WO 01/36772 A1.

Referring to claims 1-4, 14 and 15, O'Connor et al. discloses an integrated obstacle detection system as claimed (see all figures and respective portions of the specifications). O'Connor et al. further

Art Unit: 2837

states the use of direct (non-contact) detectors and indirect (contact) detectors to directly and indirectly detect an obstruction (see all figures and pages 21-29). Moreover, O'Connor et al. discloses that the direct (non-contact) detector may be of various type of sensors (page 10, line 24-27), however for this embodiment he uses a light sensor, which detects a light distribution affected by any obstruction (see figure 2A-2C). Additionally, O'Connor et al. describes the use of indirect (contact) detectors and mentions various manners in which an obstruction may be detected indirectly and provide position information to dynamically adjust the direct detector (see pages 21, 22, 24 and 26). In one embodiment, O'Connor et al. states that the output of the electric motor (Torque)<sup>1</sup> can also be used to indirectly detect an obstruction (see page 25, lines 3-17). Finally, O'Connor et al. depicts in figure 9 a controller (analyzing circuit) (202), which analysis (compares) both detecting system to determined if an obstruction is present, and provides a signal to stop or reverse the openable member's motion (see page 28, lines 26-32).

As to claims 7-9, the method steps are inherent in the product structure discussed above. Discussion is omitted.

Referring to claims 6, 11 and 17, the non-contact (direct) detector detects obstructions according to the position information provided by the contact (indirect) detector (see page 24, lines 11-23).

---

<sup>1</sup> Torque = The product of a force acting at a distance.

As to claim 10, O'Connor et al. discloses a memory (106 or 204), which is used to store values and update the reference distribution.

Referring to claims 12 and 13, O'Connor et al. addresses all the limitations of claims 7-9, in addition to disclosing that a predetermined threshold has been stored in memory to adjust the difference between the energy levels when an obstacle is detected. Furthermore, O'Connor et al. states that the system has the capacity to dynamically (variable) adjust variations in the reflected radiation (see page 26, lines 6-30).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Connor et al in view of Breed et al. U.S. Patent No. 6,442,465.

Referring to claims 5 and 16, O'Connor et al. addresses all the limitation of claims 1 and 14 and mentions the use of light sensors. However, he does not explicitly teach or describes that the light sensor is a charge coupled device sensor (CCD). On the other hand, Breed et al. discloses a vehicular component control system based on pattern recognition using optical sensors and optical images of a person, wherein a charge coupled device sensor (CCD) is used. Since

O'Connor et al. and Breed et al. are in the same field of endeavor of detecting an object, the purpose disclosed by Breed et al. would have been recognized in the pertinent art of O'Connor. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a charge coupled device sensor as used by Breed et al. within the teaching of the light sensors in O'Connor et al. for the purpose/advantages that by using a charge coupled device sensor (CCD) it improves the measurement in the x and y dimensions, thereby acquiring a wider range to detect an object. Additionally, CCDs commonly respond to about 70% of the incident light and are sensitive to infrared light, which allows low light intensities, even for ultraviolet and visible wavelengths to be detected.

***Response to Amendment***

8. Applicant's arguments have been fully considered but they are not persuasive.

It is believed that the references read on the amended claims as they have been presented.

Applicant's arguments and/or amendments are not persuasive because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. In addition they do not clearly point out the patentable novelty, which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made.



Art Unit: 2837

In response to applicant's remarks that there is no anticipation in O'Connor (WO 01/36772) for an obstruction detection system that includes an indirect detector that outputs information position to the direct detector, see page 24, lines 5-23. O'Connor clearly recites in lines 15-19: *"Thus, over this portion of the aperture, the controller 102 may rely solely on the output from the detector portion of the non-contact (direct) system, such as that shown in Figs. 1-6B. An indication of closure position may be provided as an input from the contact-based (indirect) system 100."* See in addition figure 9, which clearly depicts one in-direct obstacle detectors and one direct obstacle detector joined by a controller 202 which receives and transmits position information to dynamically adapt each detector output signal.

#### **Conclusion**

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eduardo Colon Santana whose telephone number is (571) 272-2060. The examiner can normally be reached on Monday thru Thursday 6:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Martin can be reached on (571) 272-2800 X.37. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number: 10/673,027  
Art Unit: 2837

Page 9

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center at 866-217-9197.

ECS  
August 15, 2005



DAVID MARTIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800